



e-Rock



USER MANUAL

Fleet (Line Markers) Ltd

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Fleet produced this manual in good faith and does not accept responsibility for any variation that may occur.



INTRODUCTION

Thank you for purchasing the e-ROK line marking machine from Fleet (Line Markers) Limited, The most versatile line marking aid on the market today.

For your e - ROK vehicle to meet and exceed all your expectations, we have provided you with your own operators manual.

Our manual contains the setting up, operating and maintenance procedures, which should be carefully followed in order for you to get the most out of your machine.

P.A. McGuffie founded Fleet in the 1950's, since then it has grown to be regarded as the world's leading expert in the field of line marking.

Of course it's not just the machines that Fleet are famous for, our range of line marking paints and powders are used around the world, wherever the pitch, whatever the occasion.

For more details on any of the products in Fleet's range please log onto www.fleetlinemarkers.com

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SAFETY PRECAUTIONS



WARNING

This warning symbol identifies special instructions or procedures which, if not followed correctly, could result in personal injury, or loss of life.

CAUTION

This caution symbol identifies special instructions or procedures which, if not strictly observed, could result in damage to or destruction of equipment.

Keep this manual with the e-ROK at all times so that you can refer to it whenever you need information.

All drivers must read and understand the e-ROK manual before use .

Perform daily safety checks as laid out in this manual and record. Correct any irregularities found for safe and more reliable use.

All operators should have suitable training and driving skills before use.

The vehicle is not designed or manufactured for use on public streets, roads or highways.

Do not drive through standing water.

Wear snug fitting clothing with no loose ends when driving.

Do not operate under the influence of alcohol or drugs, as your judgement may be impaired and reactions may be slowed.

The driver must always adjust the seat for maximum comfort and safety; all the controls must be easily within reach.

SAFE OPERATING PROCEDURES

The e-ROK is designed for use on a firm surface such as a grass field; this should be as open as possible and restricted for the use of the e-ROK only i.e. no animals or people to be in the vicinity. The field can be undulating but contain no ramps or steep slopes which would upset the balance of the e-ROK.

The operator needs to assure themselves that the e-ROK has been maintained to the highest standard and that the e-ROK's main systems are in good order and work correctly.

This includes:

The Brake System:

- Brake shoes are not worn.
- Brake pedal travel is not restricted.
- Brakes operate correctly and are not spongy.

The Drive System: Batteries are charged and forward and reverse controls operate correctly.

Steering: Steering components should be in good order with no excessive play. Kingpin bolts should be firm with no sign of wear or play, replace if necessary.

Wheels: Check wheel nuts are tight and tyre walls are not damaged.
Tyre pressures to be correct in all 4 wheels. (see page 16)

Driver Loading:

The e-ROK is made for a driver only, no passengers should be carried.
Adjust the seat so the driver can reach the controls comfortably.



Forward / Backward Adjustment



Back Support Adjustment

SAFETY OPERATION



WARNING SPECIFIC HAZARDS

Carry out daily safety checks before operating.

Battery Installation

- ALWAYS WEAR SAFETY GLASSES WHEN WORKING AROUND BATTERIES!
- Handle and lift batteries with care. These batteries are heavy (39Kg, 85.8 Lbs each) this is more than one person can safely lift.
- Clean all cable ends and connectors with a wire brush or emery cloth until free from oxidation or corrosion.
- Inspect battery tray or area where battery is to be placed to be sure it is clean and free from objects that could damage the battery.
- Replace any worn cables. Replace or repaint any corroded hold downs, shelves or trays.
- Do not install batteries in a completely sealed box or enclosure, in the event of over charging the gases must be allowed to escape.
- ALWAYS CONNECT THE NEGATIVE CABLE LAST TO AVOID DANGEROUS SPARKS.
- Be careful of your connections! Be absolutely certain that the proper wire or cable is connected to the correct terminal. Positive terminal of charger to positive terminal of battery. Expensive damage and dangerous sparks can occur if wires and cables are crossed.
- Tighten connections snugly, but do not over tighten. Over tightening can damage the battery and VOID THE WARRANTY.
- Recheck connections regularly.



WARNING SPECIFIC HAZARDS

CHARGING

- The charger is an intelligent unit that pulse charges the batteries, controlling the temperature rise of the batteries. Use only the supplied charging unit.

WARNING

- Connect the charger only to a suitable power supply as shown on the charger information panel.
- In order to prevent fire or explosion, never use the charger where flammable gases or vapours may be present.
- Use only in well ventilated areas.
- Do not modify the charger in any way.
- Do not open the charger, this may cause electric shock or burns.
- Keep the charger dry at all times.
- Connect charger to charge socket on the e-ROK. (A)



- Plug the charger into compatible power supply and turn on.
- The power LED will show green if the power supply to the charger is correct, if it is red there is a connection problem, contact Fleet (Line Markers) Ltd or authorised supplier for advice.
- The charge LED will show red at the start of charging, amber once the batteries reach 90% charged and green once fully charged.
- Once charging is complete turn the power supply off before disconnecting charge plug from the e-ROK.

PUTTING YOUR BATTERY INTO STORAGE

If you are storing for longer than 30 days:

1. Charge to 100% full charge (approx 14 hours) DO NOT OVERCHARGE!
DO NOT LEAVE A TRICKLE CHARGER CONNECTED!
2. Below 0° C discharged batteries can freeze and burst.
3. Store in a cool, dry area if possible.
4. Clean the battery if dirty.
5. Check the open circuit voltage every 60-90 days. Recharge if necessary.

PROPER MAINTENANCE

Your Gel battery is maintenance - free. All that is needed is to keep the battery clean, fully charged, properly secure, and the terminal connections tight (but do not over tighten).

BATTERY CHARGING

A Gel battery is pressurized and sealed, with no way to add the electrolyte inside.

CAUTION!

DO NOT OPEN A GEL BATTERY! WARRANTY WILL BE VOID IF OPENED.

ALWAYS WEAR SAFETY GLASSES.

OPERATION

- Do not use on public streets, roads, highways or footpaths.
- Assess operating area for hazards and plan work sequence accordingly.
- Do not travel across slopes, travel straight up or down.
- Adjust seat position to ensure all the controls can be safely operated.
- Do not travel on gradients that exceed 10° degrees.
- **To start:** Turn on the Isolator Key on the side of the control pod, the Battery Level Indicator will illuminate and display the battery charge level.



- Select direction of travel on the Forward/Reverse Switch on the control pod. If reverse is selected an audible warning will be heard.
- Set maximum speed required with the Speed Limiter on the control pod.

OPERATION

- Gently apply pressure to the Speed Control Pedal, the electrical brake will be released automatically, further pressure will increase the speed up to the maximum set by the Speed Limiter Control.

PEDALS

A - Emergency Brake

B - Speed Control



- To slow down, release Speed Control Pedal slowly to the desired speed.
- To stop, remove foot from the Speed Control Pedal in a controlled manner. The brake will apply automatically to the rear wheels, once the pedal is released.
- In an emergency stop situation, apply the Emergency Brake at the same time as releasing the Speed Control Pedal.
- The Brake Pedal should only be used in emergency, as the electrically operated brake should control the speed in normal use.
- To change direction of travel, stop the e-ROK, then select direction required using the Forward/Reverse Switch on the control pod.

CAUTION Never switch Forward/Reverse Switch while moving.

- Always park the e-ROK on a level surface.
- Turn the Isolator Key off when not in use.
- Remove the Isolator Key to prevent unauthorised use.
- The e-ROK will operate for a maximum of one hour once the Battery Level Indicator reaches the yellow sector. This may be reduced in arduous conditions. The internal controller will isolate the batteries to protect them before the indicator reaches the red zone. If necessary, turn off the Isolator Key and wait for the batteries to recover. You may then move the e-ROK to a position where it may be charged.
- If you need to move the e-ROK without battery power, move the Brake Control Lever at the rear to the off position, beware the e-ROK will roll if on a slope.

(See below)

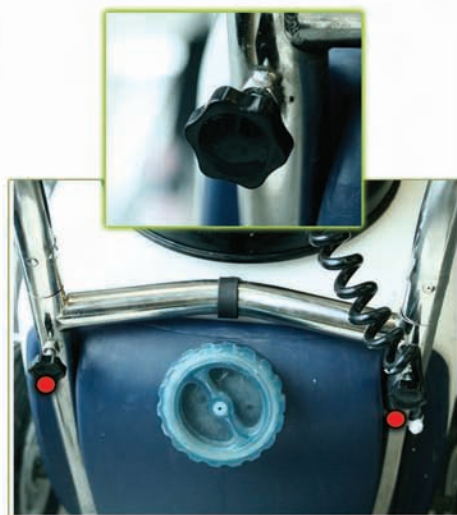


Brake Control Lever

MOUNTING & DISMOUNTING KOMBI

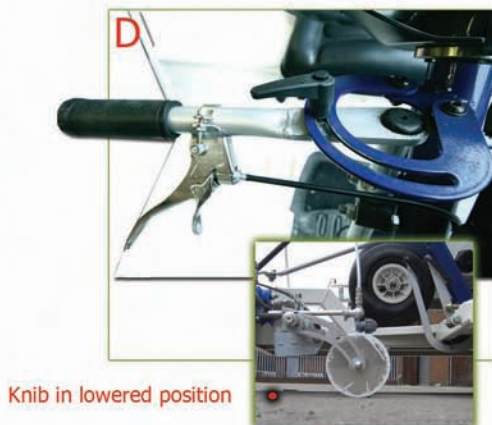
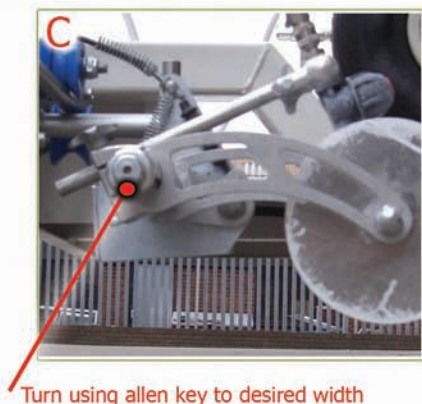
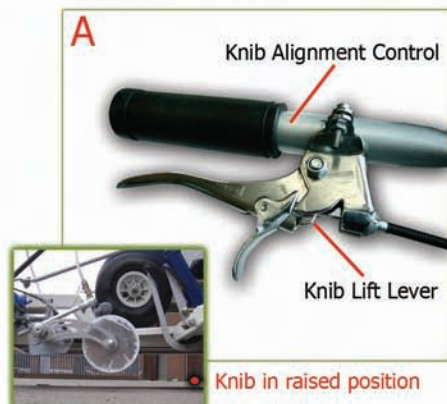
- Park e-ROK on firm level ground.
- Rotate Kombi Mount on the e-ROK to face towards the right hand side of the machine. **A**
- Push the Kombi towards the right hand side of the e-ROK, tilt kombi back and engage right hand side front axle in to the Kombi Mount. **A**
- Raise the rear of the Kombi by lifting the handlebars and rotate clockwise until in line with the wheel retainer, for the left rear wheel then lower to engage wheel. **B / C**
- If using the e-ROK wheeled knob, connect the flexible hose to the Kombi male plug located at the front of the machine. **D**
- Slacken handlebar clamp screws **E**, lift out bars from their sockets then rotate 180 degrees **F**, lower back into the sockets and tighten clamp screws.
(As seen in step E)
- In order to dismount Kombi reverse the above procedure.





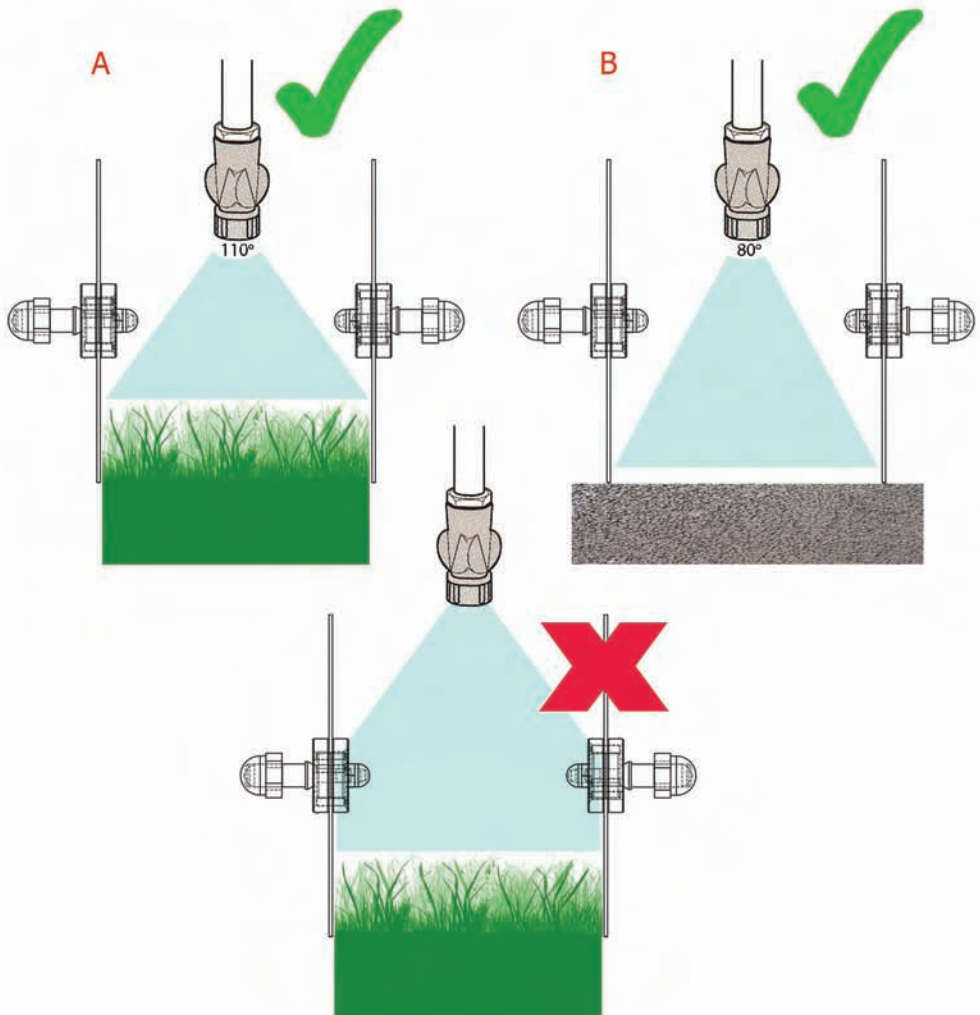
OPERATING WHEELED KNIB

- Only move Knib Alignment Control with the knib in the raised position. **A**
Center mark with the lever in the rear position, Side mark with the lever forward.
- Once in position lock in place using Thumb Lock Control. **B**
- Do not operate with the lever unlocked as the knib may move unexpectedly.
- Adjust the required line width using the adjuster on the end of the knib cross shaft. **C**
- Lower the knib by releasing Knib Lift Lever and check width at ground level. **D**
(WHEN NOT MARKING ALWAYS RAISE THE KNIB, THIS AVOIDS TRANSFER OF PAINT FROM DISCS TO GROUND SURFACE.)



OPERATING WHEELED KNIB

- Adjust nozzle position to achieve desired line, minimising excess paint on the discs.
- Paint fan should hit discs just above the height of the grass. **A**
- For hard surface marking this should be just above the ground contact point of the discs. **B**
- Excessive paint deposits on the discs will run off.



INSPECTION & MAINTENANCE PROCEDURES



WARNING MAKE SURE THE ON/OFF KEY IS REMOVED BEFORE PERFORMING ANY MAINTENANCE.

OVERVIEW

The e-ROK operates in a demanding environment and the demands in a busy season may be large, so it is prudent to err on the conservative side regarding inspections and maintenance procedures.

Bearing in mind the above, the safety of the public and the driver, an inspection procedure has been devised which accommodates all areas of a safety critical nature while maintaining a direct approach and minimising wasteful duplication. The procedure relies on the operator for a day to day basic inspection routine, they being the person ideally placed to spot any unusual events, being intimately familiar with the vehicle and its characteristics. It also allows the operator full involvement and the opportunities to fulfil their obligations.

The procedure involves daily and weekly checklists, which are the responsibility of the operator.

Part diagrams and repair procedures can be found in the e-ROK Repair Manual.

CAUTION

CLEANING

Do not direct high pressure hose at the control pod, charge and power sockets, accelerator control box (under the floor panel with the accelerator pedal attached) or the brake release lever.

Do not wash inside the battery compartment.

DAILY CHECKLIST

Check	Mon	Tues	Wed	Thu	Fri	Sat	Sun
Check seat is firmly mounted and easily adjustable.							
Check tyre pressure are correct.							
Check wheels are secure.							
Check steering is secure and free from excessive play.							
Check brakes are fully functional.							
Check machine is clean and free from excessive mud.							
Check mudguards for security and damage.							
Check on/off switch functions correctly.							
Check throttle and brake pedals operate freely and return to the rest position.							
Comments							
Signature							

WEEKLY CHECKLIST

Check	Mon	Tues	Wed	Thu	Fri	Sat	Sun
Check tyre condition and tread depth.							
Carefully check of all chassis welds visually.							
Check visually for any cracks or failed structural members.							
Check wheel nuts are secure.							
Check all bolts to ensure they are tight.							
Check track rods and steering joints for wear and security.							
Check wheel bearings for excess play.							
Check gearbox for oil leaks.							
Comments							
Signature							

e - ROK MAINTENANCE



WARNING MAKE SURE THE ON/ OFF KEY IS REMOVED BEFORE PERFORMING ANY MAINTENANCE.

BRAKES

WARNING: Dust created by the braking system may contain asbestos, which is a health hazard.

Never blow it out with compressed air and don't inhale any of it. An approved filtering mask should be worn when working on the brakes.

DO NOT use petroleum-based solvents to clean brake parts. Use Brake cleaner only.

LUBRICATION



- Red dots indicate where grease nipples are located. Grease weekly with a multi-purpose grease or more frequently in adverse conditions.



SPECIFICATIONS

Chassis:	Length	Width	Height
	1945mm	1000mm	1063mm

Maximum Load including driver: 250kg

Minimum Driver Height: Do not allow drivers who cannot reach the controls & fully depress the pedals to operate the machine.

Unladen Weight : 164kg (not including batteries)

ENGINE:	1300 watt electric motor		
BRAKES:	Front,	Cable operated drum brake	
	Rear,	Electrically operated drum brake	
Tyre Pressures:	Front	10 - 15 psi	0.7 - 1.0 bar
	Rear	10 - 15 psi	0.7 - 1.0 bar

Transportation

When transporting the e-ROK ensure brake is engaged



FAULT FINDING

The Fault Indication Light identifies the fault type by a series of flashes followed by a long pause.

Count the number of flashes between the long pause and check chart below.

Flash Code	Fault Type	Suggested Action
1	Battery needs recharging.	Battery charge is running low, recharge as soon as possible.
2	Battery voltage too low.	Drive inhibited. Battery voltage too low, recharge batteries.
3	Battery voltage too high.	May be caused by overcharging. Use supplied charger only.
4	Current limit time out.	The e-ROK has drawn too much current for too long. Turn power off for a few minutes then try again. Check motor and wiring loom for shorts.
5	Brake fault.	Check park brake and wiring loom for shorts and open circuits.
6	Speed controller depressed at power up.	Ensure when turning power key on, the speed controller is not pressed down.
7	Throttle potentiometer error.	Check throttle potentiometer is correctly set up. Check for open or short circuits on potentiometer wiring. Check condition of potentiometer.
8	Motor fault.	The motor or motor wiring loom may be faulty. Check for open or short circuits.
9	Other internal error.	Contact service agent.

For further advice please contact your Fleet supplier..

FAULT FINDING

All but the simplest fault finding tasks require varying degrees of skill to accomplish.

Before doing any tests described in the following table check:

- A. That the e-ROK has not received any physical damage.
- B. That the e-ROK has sufficient charge in the batteries.
- C. That the brake lever at the rear of the e-ROK is in the "ON" position.

Fault	Possible Cause	Action
Metallic sound when emergency brakes applied.	Brake shoes worn out.	Replace brake shoes, refer to procedure in e-ROK Repair Manual.
Metallic sound when electronic brakes applied.	Brake shoes worn out.	Replace brake shoes, refer to procedure in e-ROK Repair Manual.
No electrical power.	Flat batteries.	Recharge.
No electrical power.	Overload protection activated.	Press reset button.
No electrical power.	Fuse Failed.	Check wiring and replace fuse.
No electrical power.	Poor battery connection.	Remove terminal connections clean and replace.

If in any doubt when a problem is found with the motor unit please contact your Fleet supplier.

RISK ASSESSMENT

RIDE ON LINE MARKING VEHICLE

Potential Hazard:

Drivers coming in contact with other people or stationary objects.
Possibility of e-ROK turning over.

Risk - consequence:

Physical injury.

Risk - probability:

Possible if not controlled.

Control measures:

- 1) Suitable driver training in a safe environment free from people and animals.
- 2) Restrict the top speed of the e-ROK to one that is suitable for the conditions.
- 3) Do not use when ground conditions prevent the operator maintaining full control.
- 4) If possible secure the area from people and animals. If not possible then operate at times when least number of people are in the vicinity.
- 5) Have an assistant to help watch out for dangers if people are around..
- 6) Travel in a forward direction whenever possible.
- 7) Approach obstacles and hazards at a suitable speed, always be prepared to stop.

EC DIRECTIVES
MACHINERY/EMC
DECLARATION OF CONFORMITY

We hereby certify that the following machinery complies with all the Essential Health and Safety requirements of BS EN 836:1997
and the EN61000 - 3 - 2, EN61000 - 6 - 3
EN61000 - 3 - 3, EN61000 - 6 - 1
and as amended and the National Laws and Regulations adopting these directives.

Chassis Number: _____

Manufactured for	Fleet (Line Markers) Ltd
	Fleet House
	Spring Lane
	Malvern
	WR14 1AT

The Chassis Number is located at the rear of the Transmission inspection plate.

Date of Manufacture: _____

A technical construction file for this product is retained at the above address.

WARRANTY

Your e - ROK is supplied with a full 12 month warranty against manufacturing defects from date of purchase.

An extended 12 month free of charge e - ROK battery warranty is available @ www.erokbattery.com



This warranty does not extend to damage or failure caused by abuse or misuse howsoever caused.

Your consumer statutory rights are not affected by this warranty.

e - ROK Serial Number

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RECOMMENDED FLEET PAINTS

Fleet's ever increasingly wide range of Linemarking paints, are perfect for Grass, Synthetic and Hard surfaces.

Their dilution rates, methods of application durability all vary.

All Fleet's products come with instructions provided, and the Sales Team are available to provide information and advice during normal working hours.

Reddispray Plus

Specially formulated ready to use paint.

Produces a durable bright line with no dilution required.

Pitchmarker C, Q2 and Super C:

These Pitchmarkers are concentrates and are manufactured for dilution with water. Add water until your desired strength is obtained. The following are the recommended dilution rates for use with the Kombi.

First Mark

1 part Pitchmarker C to 2 parts water.

1 part Pitchmarker Q2 to 3 parts water.

1 part Pitchmarker Super C to 4 parts water.

Overmarking

1 part Pitchmarker C and between 2 and 6 parts water.

1 part Pitchmarker Q2 and between 2 and 5 parts water.

1 part Pitchmarker Super and between 4 and 10 parts water.

Blinder:

Specially formulated product to give an extremely bright line.

A concentrated paint with the following recommended dilution rates:

First Mark 1 part Blinder to 4 parts water.

Overmarking 1 part Blinder and between 4 and 20 parts water.

Permanent Marking Fluid:

For hard surface marking dilute: 1 litre of water to every 5 litres of PMF.

Synthetic Turf Coating (STC):

Specially formulated for Rubber Crumb, Sand Dressed, Sand Filled, and Water Based Synthetics.

Dilute 4 parts STC to 1 part Water.